

Competitive Access to Telecom: Spectrum Policy and M&As¹

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Introduction

Virmani (1999) argued for complete de-licensing of entry into (and exit from) Telecom services coupled with competitive auction of *tradable* spectrum permits. The former was to be achieved through an amendment of the Telegraph Act to replace the public monopoly provisions in the act by an injunction to “promote competition.” Despite the fact that the Telegraph act has not been amended in this way, effective de-licensing is still possible through a system for “automatic licensing,” i.e. free issue of licenses subject to transparent published guidelines. This is what the TRAI has recommended to the government, (which has accepted this recommendation) and is drawing up detailed guidelines for implementing. Spectrum permits are however still strictly controlled by the spectrum advisor with no provision for trading. This aspect needs to be reconsidered by TRAI.

Now that we are on the way to de-licensing, the issue of market structure and competition assumes greater urgency. This paper therefore focuses on the Issue of Mergers and Acquisition. In the case of user/consumer access this issue is closely related to the certain aspects of spectrum policy. The issues connected with spectrum cannot, therefore be considered in isolation from that of Mergers and acquisition.

Current Situation

The last mile link between the local exchange and the customer was historically considered a “natural monopoly.” This last mile link can now be provided through the em spectrum at 1/4th the cost of copper wire and this differential is likely to increase. As per the current availability and allocation of spectrum as many as eight different suppliers can supply access/connectivity to the telephone user/consumer (4 in the GSM band and 4 in the CDMA band). This is in addition to, what was till 1991 the incumbent government owned wire line monopolist (BSNL). This means that, in principle the telephone industry

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(telephony) has been transformed from a ‘natural monopoly’ to a fairly competitive oligopoly.

The decline in the cost of Telecom provision does not however mean that there is no lumpiness in the technology. There is still a region of declining marginal and average cost and consequently a minimum efficient scale of operation (MES). The potential market in any geographical region (circle, district, State) will depend on the population density and average per capita income of that region. The largest number of providers who can be sustained in a region ($N = \text{Market Size}/\text{MES}$) will vary from region to region. Given the diversity of India, there will be circles in which only one or two providers are best from a technical efficiency perspective. There will be other circles, which can efficiently sustain four or five providers.

Given the intense competition, falling prices and fast growth of spectrum based services, it is anticipated that between 3 and 5 national telephony suppliers (unified licence: Access, NLD & ILD) and a few niche players in each segment can be profitably sustained by the market. If this judgement is broadly correct then it is essential to facilitate mergers and acquisitions so that the growth of the industry can be sustained and to ensure the prevalence of a competitive environment that benefits the consumers.

In addition to telephony the demand for data and information service will gradually expand. Thus traditional wire-line connectivity, cable TV and broadband connectivity services could gradually evolve into a new integrated market for high quality/ high volume data services with a diversity of content (telephony, internet, TV etc). The cost of this service will then be much higher than for supply of telephone services through the spectrum. This cannot however be taken for granted. DTH, 2G/3G and other spectrum-based technologies could emerge as competitors to wire line service even for high quality services. It would therefore be a mistake to devise policies, based on the assumption that wire line and spectrum based services constitutes two separate markets.

Spectrum

Spectrum policy must rest on an understanding of the concept of resource rent. The simple logic of competitive resource rent is that spectrum has positive price in any given geographical area only if the demand for it by telecom service providers is greater than

the supply at zero price. It is therefore necessary (conceptually) to divide the national space into low-density and high-density areas:

- (a) Low-density areas, such as rural areas. Here the number of telecom service providers will be very few (0 to 3) and a considerable portion of the spectrum will be left unutilised. The price/cost/charge for the spectrum in the low-density areas should be zero. The appropriate policy here is to charge for the non-use of the spectrum and cross-subsidise those who are using the spectrum. The spectrum non-use charge could be avoided by putting the spectrum in escrow with the regulator who would have the right to allocate it (temporarily) to alternative, local or amateur users of the spectrum. This will encourage experimentation and innovation in the development of low cost technologies for rural areas. The original allottee would retain the right to retrieve the spectrum from escrow whenever it wanted to use the spectrum to provide service. In addition, the regulatory system must not only allow, but also actively promote sharing and common use of the physical equipment in low-density areas so as to increase usage to the level of minimum efficient scale (MES). For instance access providers would be free to set up one or more joint venture companies to provide telecom services to very low-density areas or to sub-contract the supply to a specialised provider of rural telephony services.
- (b) High-density areas, such as metros, where the competitive spectrum prices is positive. Here the key issues are tradability and market pricing of the spectrum. Within the high-density area, spectrum price can differ from one sub-area to another.² The true market price can only be determined if such trading is allowed. Such a market for spectrum would also ensure efficient allocation and use of the spectrum as long as the market is reasonably competitive (i.e. regulator only has to ensure against misuse of monopoly power).³ There would be no need for detailed bureaucratic rules and regulations to enforce efficient usage of the spectrum.

Competition Policy: Mergers & Acquisition

Traditional analysis of competition policy and monopoly focused on the issue of dominance and industry concentration. In the Telecom sector the historical situation in

² Even within a given metro area there will be hot spots where the demand for spectrum is very high.

³ Recommendation (c) below partly takes care of this problem.

many countries was that of State owned and created monopoly with 100% of the market. In countries where some private participation was allowed the incumbent retained till the eighties, an overwhelming majority of the market. In this situation, the merger of two small (spectrum based) fringe players in a low density area, that increases conventional measures of concentration, may increase competitive pressure on the incumbent state (wire line) monopoly provider and be beneficial for consumers. The conventional measures of concentration in term of sales (such as HHI & CRn) are therefore less important than the distribution and concentration of the available spectrum (see below) at the local/circle level. Paradoxically, however, the traditional concentration analysis may have some residual validity in developing countries because of the greater threat of governance failure and regulatory capture by the monopolist.

The data and analysis of market dominance and number of players is generally based on the national market, not on the market in every city or circle. The reason for doing so is compelling. With the existence of five (say) national players there is little danger of monopolistic exploitation even if there are only one or two players in a circle where it would be technically inefficient to have three players. There is always a potential threat of entry from the other four or three national players, if the incumbents in the circle try to exploit their potential monopoly power by raising prices above average cost and generating excess profits. A vast country like India also provides enormous scope for benchmark competition. The regulator to stem abuse of market power (see below) in a few circles can use the information generated by this benchmark competition.

Modern analysis of monopoly and competition (in contrast to the traditional analysis) focuses on two aspects that are very appropriate for the Telecom sector today. These are Contestability and Abuse of market power.

- (a) Abuse of Market Power: The focus of the modern literature has shifted completely from dominance and concentration issues to the issue of abuse of market power. This is an important issue, which can and must be dealt with through the normal regulatory procedures. In fact many of the problems that come up before TRAI have this issue as one element.
- (b) Contestability: The threat of entry has been found to be as important an instrument of competition as actual entry. A lot more attention therefore needs to be paid to this

factor than is common. In particular, in the Telecom context it is essential to ensure that there is free spectrum available for new entrants when the number of providers goes below some threshold. How this should be done can differ between high density and low-density areas. The distribution and concentration of the spectrum in the high-density areas is an issue in the high-density areas as it can distort the market for tradable spectrum permits. The availability of spectrum for new entrants is also an issue if the number of providers with spectrum becomes too few.

Recommendations

In the light of this analysis I would recommend the following policy regarding mergers and acquisitions:

- (a) Merger/Acquisition should be disallowed if the merged entity has more than 1/4th of the *National telecom market* (Access + NLD + ILD) and there should be a presumption against merger/ acquisition if the resultant entity would have more than 1/5th of the National Market.⁴ Merger/acquisition can be allowed if there is simultaneous divestment of some other part of the firm to ensure that this condition continues to be met. One of the factors that will enter in the final decision, is the acquiring company's promoter-manager's holding in other ostensibly competing companies. These holdings may be required to be divested as a condition of the merger.
- (b) If this condition is met all mergers and acquisitions should be automatically allowed subject to the following post-merger actions with regard to the spectrum in *every geographical area*. Any acquired spectrum above 50% (currently 17.5 MHz) of the available GSM band or 50% (currently 10 MHz) of the available CDMA band would have to be divested. If the acquired company has a combination of the two bands, in excess of $a \cdot B_{gsm}/2$ and in excess of $(1-a) \cdot B_{cdma}/2$, $0 < a < 1$ then the merger/acquisition would have to be reviewed to determine the required divestment. For instance if the merged company has more than 13.125 MHz of GSM band and more than 2.5 MHz of CDMA band (i.e. $a = 0.75$) then some divestment may be required.

⁴ The arguments used to justify a unified license for all telecom services are still valid here. At some point in the future the definition must however be modified/expanded to include cable television and broadband.

(c) Provisions for divestment of spectrum as per the conditions in (b) should be built into the new spectrum policy so that the same surrender rules can be applied to existing players if deemed necessary in the public interest.

References

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